R E P O R T R E S U M E S

ED 011 517 SP 000 342

FOUNDATIONS OF MATHEMATICS FOR ELEMENTARY TEACHERS.

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PUB DATE 19 APR 66

EDRS PRICE MF-$0.09 HC-$0.20 5P.

DESCRIPTORS- *ELEMENTARY SCHOOL TEACHERS, FILMS, GEOMETRY, *INSERVICE PROGRAMS, *INSTRUCTIONAL MATERIALS, *MATHEMATICS, *MATHEMATICS CURRICULUM, MATHEMATICS INSTRUCTION, SECONDARY SCHOOL TEACHERS, VIDEO TAPE RECORDINGS, DES MOINES

TO PROVIDE ELEMENTARY SCHOOL TEACHERS WITH AN OVERVIEW OF SOME OF THE IDEAS OF MATHEMATICS BEFORE THEY UNDERTAKE MORE INTENSIVE STUDY, 12 VIDEO TAPES, A CONSULTANT'S GUIDE, AND A TEXTBOOK ON FOUNDATIONS OF MATHEMATICS WERE PREPARED. THE MATERIAL COVERS WHOLE-NUMBER OPERATIONS AND SYSTEMS, NONMETRIC GEOMETRY, FRACTIONAL NUMBERS, COMPUTATION AND MEASUREMENT, INTEGERS, PROBLEM SOLVING, COORDINATE SYSTEMS, AND REAL NUMBERS. THE TEXT, GUIDE, AND TAPES WERE TO HAVE BEEN MADE AVAILABLE TO SCHOOLS BY JUNE, 1966. (LC)

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FOUNDATIONS OF MATHEMATICS FOR ELEMENTARY TEACHERS

SP000 342

The State College of Iowa, Cedar Falls, Iowa, has developed a program on the FOUNDATIONS OF MATHEMATICS FOR ELEMENTARY TEACHERS, with financial support from the National Science Foundation and the College. This project provides a basic in-service program in mathematics for elementary school teachers, using 12 thirty-minute video-tapes or kinescopes, text materials, and local consultants. The program is intended to provide an orientation to the foundations of mathematics -- a program that enables teachers to get an overview of some of the ideas of mathematics before more intensive study is undertaken.

The video-tapes were made in the studios of KDPS-TV, Des Moines Public Schools, Des Moines, Iowa, with E. Glenadine Gibb as the instructor, and Robert Gabler, a member of the KDPS-TV staff, as director. These video-tapes, text, and consultant's guide have been prepared by Augusta Schurrer and E. Glenadine Gibb, with the assistance of E. W. Hamilton and Diane Baum. Kinescopes have been made from the 12 video-tapes. These materials, as a package, are intended to be used by school systems which wish to provide an in-service program in mathematics for their teachers, using their own staff or other personnel as consultants.

Preliminary materials were developed in 1962-1963 and used by the Des Moines Public Schools. Kinescopes were used on an experimental basis by four other Iowa School Systems. Different plans were tested for local consultants -- junior and senior high school mathematics teachers, school consultants in mathematics and in elementary education elementary teachers with special competence in mathematics. On the basis of use in these school systems, both the film and the written materials were revised during 1965 and are expected to be available in Summer 1966.

The Program

The titles of the films are as follows:

1. What is a Number?
2. A System of Numeration
3. Operations on Whole Numbers
4. Techniques of Computation
5. Non-metric Geometry
6. The Fractional Numbers: Addition and Subtraction
7. The Fractional Numbers: Multiplication and Division
8. Measurement
9. The Integers
10. Problem Solving
11. Coordinate Systems
12. Real Numbers

A chapter in the text serves as background for each film and also gives some suggestions for developing the mathematical ideas in elementary classrooms.

It is recommended that the films be viewed by groups of teachers and that after each film a local consultant amplify and clarify the ideas and make whatever extensions seem profitable for the particular viewing group. The consultant's guide provides suggestions for using each film and related sections in the text in a workable one-hour in-service session.

COLLEGE OF EDUCATION

MAY 12 REC'D

April 29, 1966

M E M O R A N D U M

TO: Members and Associates of the Graduate Faculty in Education

FROM: Jack Reid, Associate Dean for Graduate Studies

We have just received the attached letter from the Clearinghouse on Urban School Personnel.

If you are engaged in such research or have past publications having to do with urban school personnel, please advise this office, in order that your report may be included in a listing being compiled for the University as a whole. Please enter your report on the bottom of this memorandum sheet and return it to S. H. 114 by April 27.

JR:pr

REPORT: Foundations of Mathematics for Elementary Teachers

Inservice program in mathematics, developed for use an orientation to the study of mathematics on the part of elementary school personnel. under a grant from the National Science Foundation to State College of Iowa. Revised text materials, consultant's guide, and films will be available to schools by June 1 (tentative date) through Field Services, State College of Iowa, Cedar Falls, Iowa.

Description of the project is attached.

NAME: E. Glenadine Gibb

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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